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PATENT COOPERATION TREATY

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From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

To:

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IP  
time limit 26.01.05

Date of mailing  
(day/month/year)

20.09.2004

Applicant's or agent's file reference  
2002P15759WO

IMPORTANT NOTIFICATION

International application No.  
PCT/EP 02/12457

International filing date (day/month/year)  
07.11.2002

Priority date (day/month/year)  
26.09.2002

Applicant  
SIEMENS AKTIENGESELLSCHAFT

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international  
preliminary examining authority:



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INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002P15759WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 02/12457	International filing date (day/month/year) 07.11.2002	Priority date (day/month/year) 26.09.2002
International Patent Classification (IPC) or both national classification and IPC G05B23/02		
Applicant SIEMENS AKTIENGESELLSCHAFT		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 2 sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand  22.03.2004	Date of completion of this report  20.09.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Helot, H  Telephone No. +49 89 2399-2287 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 02/12457

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

**Description, Pages**

1-6 as originally filed

**Claims, Numbers**

1-11 received on 15.07.2004 with letter of 13.07.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 02/12457**

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	1-11
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

- 1 Reference is made to the following documents:  
D1: WO-A-93/21615;  
D2: US-A-6 091 334.
- 2 Document D1 is regarded as the prior art closest to the subject-matter of claim 1. D1 shows a method for monitoring a technical installation comprising acquiring one human physiological reaction (EEG) of a human during an inspection tour of the human around one part of the technical installation (see abstract and page 2 last paragraph).
- 3 The subject-matter of claim 1 differs from this known method in that a human perception and/or sight is analysed to determine a condition of the part of the technical installation.  
The subject-matter of claim 1 is therefore new (Article 33(2) PCT).
- 4 The problem to be solved by the present invention may be regarded as improving the acquisition of information.  
The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:  
In the method disclosed in document D1 defects in the technical installation could induce stress situations for the human operator and be detected. Nevertheless, an analysis of the human perception to determine a condition of the monitored part is not suggested. Document D2 and the further available prior art do not give any hint in the direction of the claimed method. Hence, starting from D1 it would not have been obvious for the skilled person to arrive at the method of claim 1.  
Thus, the subject-matter of claim 1 involves an inventive step.
- 5 The apparatus as defined in claim 7 corresponds to the method as defined in claim 1 and involves an inventive step accordingly.
- 6 Claims 2-6 and 8-11 are dependent on claims 1 and 7 respectively and as such also meet the requirements of the PCT with respect to novelty and inventive step.

## Claims

1. Method for monitoring a technical installation, especially  
for carrying out diagnosis,  
5 comprising acquiring at least one human physiological re-  
action of a human during an inspection tour of said human  
around at least one part of the technical installation,  
whereby human perception and/or sight is analysed to de-  
termine a condition of said part of the technical instal-  
10 lation.
2. Method according to claim 1,  
whereby said human physiological reaction includes at  
least one of neuritic currents and changes in neuritic  
15 currents and blood pressure and changes in blood pressure  
and pulse rate and changes in pulse rate and pulse  
strength and changes in pulse strength and galvanic skin  
reflex and changes in galvanic skin reflex and breathing  
patterns.
- 20 3. Method according to claim 1 or 2,  
whereby a camera device is employed to record said human's  
sight including changes in said human's directions of  
sight.
- 25 4. Method according to any of claims 1 to 3,  
whereby said human is equipped with at least one sensor  
device to acquire said human's physiological reaction.
- 30 5. Method according to any of claims 1 to 4,  
further comprising storing said human's physiological re-  
action in a database, said database representing a history  
of said human's physiological reaction.
- 35 6. Method according to any of claims 1 to 5,  
further comprising assigning said acquired human physio-  
logical reaction at least one of a failure and process

disturbance and normal operation of at least one component of the technical installation.

7. Apparatus for carrying out diagnosis of a technical installation,

comprising at least one sensor device for acquiring at least one human physiological reaction of a human during an inspection tour of said human around at least one part of the technical installation, whereby human perception and/or sight is analysed to determine a condition of said part of the technical installation.

8. Apparatus according to claim 7,

whereby said human physiological reaction includes at least one of neuritic currents and changes in neuritic currents and blood pressure and changes in blood pressure and pulse rate and changes in pulse rate and pulse strength and changes in pulse strength and galvanic skin reflex and changes in galvanic skin reflex and breathing patterns.

9. Apparatus according to claim 7 or 8,

further comprising a camera device to record said human's sight including changes of said human's directions of sight.

10. Apparatus according to any of claims 7 to 9,

further comprising a database for storing said human physiological reaction, said database representing a history of said human's physiological reaction.

11. Apparatus according to any of claims 7 to 10,

whereby said acquired human physiological reaction is assigned at least one of a failure and process disturbance and normal operation of at least one component of the technical installation.